

CLAIM OR CLAIMS

What I claim as my invention is:

1. A suite of parking regulation control systems for capturing visual and numerical information about a parked vehicle, the system comprising:

a laser-based distance measuring device mounted on the outside of the patrol or street sweeping vehicle, or within a handheld unit;

a waterproof miniature closed-circuit television camera mounted on the outside of the patrol or street sweeping vehicle, or within a handheld unit;

a housing to contain both measuring device and camera;

a positioning arm to which the housing is mounted that can be aimed from within the patrol or street sweeping vehicle;

a video monitor mounted inside the patrol or street sweeping vehicle to display captured images and indicate what the camera is aimed at;

a memory device in the patrol or street sweeping vehicle to capture, combine, and store individual still frames of the video data, along with date and time;

a means for manually triggering the capture of a still frame of video data.

2. The parking regulation control system, as recited in claim 1, further comprising:

a proximity sensor for measuring distances between a parked vehicle and a point of reference;

a means of setting a threshold for the proximity sensor to indicate a distance violation;

a visual indication in the video monitor of the proximity value and when a threshold has been exceeded;

a coupling of proximity data with the video data that is also captured.

3. The parking regulation control system, as recited in claim 1, further comprising:

a memory device in the patrol or street sweeping vehicle for temporary holding and combining multiple captured images;

a switch on the housing to select the number of images to be combined in the composite image;

an output from the memory device for display of the combined image on a single monitor;

a data storage device in the patrol or street sweeping vehicle for taking the combined image data and storing it;

a means for manually triggering the storage of combined images from the memory device to the storage device.

4. The parking regulation control system, as recited in claim 1, further comprising:

a data processing module for executing software applications;

a character recognition application for the conversion of graphics data to text data;

a means for automatically initiating the character recognition application.

5. The parking regulation control system, as recited in claim 1, further comprising:

a wireless communication system device for transferring stored data from the patrol or street sweeping vehicle to another site;

a means for initiating the transfer of data from the patrol or street sweeping vehicle.

6. The parking regulation control system, as recited in claim 1, wherein the video target is a license plate number of the parked vehicle.

7. The parking regulation control system, as recited in claim 1, wherein the video target is a parking-permit on the parked vehicle.

8. The parking regulation control system, as recited in claim 1, wherein the video target is a motor vehicle registration sticker of the parked vehicle.

9. The parking regulation control system, as recited in claim 1, wherein the video target is a display window of a parking meter.

10. The parking regulation control system, as recited in claim 1, wherein the video target is a partial or full view of the parked vehicle.

11. The parking regulation control system, as recited in claim 1, wherein the video target is a fire hydrant or any other point of reference.

12. The parking regulation control system, as recited in claim 1, further comprising a camera-aiming mechanism to control pan, tilt, zoom from within the patrol or street sweeping vehicle.

13. The parking regulation control system, as recited in claim 1, wherein the camera-aiming mechanism has a telescoping extension arm on the outside of the patrol or street sweeping vehicle.

14. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to a fire hydrant.

15. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to a curb.
16. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to a driveway.
17. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to a restricted parking zone.
18. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to a street corner.
19. The parking regulation control system, as recited in claim 2, wherein the proximity target is a vehicle relative to any other point of reference.
20. The parking regulation control system, as recited in claim 2, further comprising a proximity device mounting-bracket located on the exterior of the patrol vehicle.
21. The parking regulation control system, as recited in claim 3, further comprising a display coupled to the memory device, the display showing the first captured image on one side of the screen and the second image on the other side of the screen.
22. The parking regulation control system, as recited in claim 3, wherein the memory device overlays the display with text indicating the date and time.
23. The parking regulation control system, as recited in claim 3, wherein the memory device overlays the display with text indicating a proximity value and violation threshold.
24. The parking regulation control system, as recited in claim 3, wherein the number of memory device overlays can be adjusted.
25. The parking regulation control system, as recited in claim 3, wherein the number of memory device overlays is set by a dial or switch on the housing.

26. The parking regulation control system, as recited in claim 4, further comprising a data processing module coupled to the memory device.
27. The parking regulation control system, as recited in claim 4, wherein the character recognition engine target is a license plate.
28. The parking regulation control system, as recited in claim 4, wherein the character recognition engine target is a vehicle registration.
29. The parking regulation control system, as recited in claim 4, wherein the character recognition engine target is a parking permit.
30. The parking regulation control system, as recited in claim 4, wherein the character recognition engine target is a parking meter.
31. The parking regulation control system, as recited in claim 3, wherein the memory device overlays the display with text indicating the output of the character recognition engine.
32. The parking regulation control system, as recited in claim 5, wherein the data communication module is coupled to the memory device.
33. The parking regulation control system, as recited in claim 5, wherein the memory device transfers information to the communication module in one or more formats that are compatible with third-party systems.
34. The parking regulation control system, as recited in claim 5, wherein the data communication module sends license plate data to third-party systems for verification of whether or not a vehicle is stolen.
35. The parking regulation control system, as recited in claim 5, wherein the data communication module receives verification of whether or not a vehicle is stolen based on information previously sent.

36. The parking regulation control system, as recited in claim 5, wherein the data communication module sends composite image data to another site for generation of parking citations.

37. A method for enforcing parking regulations comprising:

capturing an image of a parked vehicle;

capturing second of the vehicle, parking meter, hydrant, or other reference points;

combining all images along with text;

storing the combined data in the patrol or street sweeping vehicle;

transferring the stored data to another site;

generating a traffic citation;

billing the customer based on the type of violation incurred.

38. The method for enforcing parking regulations, as recited in claim 35, further comprising the steps of:

comparing the proximity of the parked vehicle with one or more fixed reference points; and

overlaying the proximity value as text on the combined image data.

39. The method for enforcing parking regulations, as recited in claim 35, further comprising the steps of:

analyzing images for characters; and

overlaying the characters as text on the combined image data.

40. The method for enforcing parking regulations, as recited in claim 35, further comprising the steps of:

extracting combined data from data storage device of the patrol or street sweeping vehicle, and sending it to the communication module;

sending data from the communication module by wireless means to another site;

removing the locally stored data from the patrol or street sweeping vehicle upon verification from the communication module that data has been successful transferred; and

generating a parking citation.